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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,274	09/16/2003	Ben M. Ishino	38190/265282	1470

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EXAMINER	
BURCH, MELODY M	

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/663,274	ISHINO, BEN M.	
	Examiner	Art Unit	
	Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/17/05 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 6, 10-15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6244541 to Hubert.

Re: claims 1-3, 6, 10-15, and 18. Hubert shows in figures 1 and 10 a shock isolation system for reducing a transmission of energy in the form of shocks between first (4,6, 10'''') and second (1,2,3,5,11'''') devices, the system comprising: at least two linear bearing assemblies 22i,23i (one of which is shown but a plurality are present as evident by the description in col. 7 lines 19-21 extending substantially parallel in an axial direction between the first and second devices, each bearing assembly having a shaft member 23i connected to one of the first and second devices and a linear bearing 22i

connected to the other of the first and second devices, the linear bearings being configured to move axially on the shaft members such that the first and second devices are configured for relative motion therebetween in the axial direction and the bearing assemblies prevent a rotation between the first and second devices about an axis defining the axial direction by virtue of the lack of space between the shaft member and the first and second devices, and at least two isolators $12'_1$ and $12'_2$ configured to be axially loaded by a relative motion between the first and second devices in the axial direction, the isolators thereby being deformed to at least partially reduce the transmission of energy between the devices.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 5, 6, 7, 8, 10-15, 17, 18, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6244541 to Hubert in view of US Patent 6523796 to Abramowsky et al.

Re: claims 1-3, 5, 6, 8, 12-15, 17, 18, and 20. Hubert shows in figures 1 and 10 a shock isolation system for reducing a transmission of energy in the form of shocks between first (4,6, 10"") and second (1,2,3,5,11"") devices, the system comprising: at least two linear assemblies 22i extending substantially parallel in an axial direction between the first and second devices, the assemblies restraining rotation between the

first and second devices about an axis defining the axial direction to the same extent as Applicant, but does not disclose that the linear assemblies are linear bearing assemblies as claimed.

Abramowsky et al. teach in figure 9 the use of a linear bearing assembly extending substantially parallel in an axial direction between a first 31 and a second 17,25 device, the bearing assembly having a shaft member 29 connected to one of the first and second devices (particularly the second device) and a linear bearing shown surrounding element 29e in the area of element 31e connected to the other of the first and second devices, the linear bearing being configured to move axially on the shaft member such that the first and second devices are configured for relative motion therebetween in the axial direction; and at least two isolators 35e,39e configured to be axially loaded by a relative motion between the first and second devices in the axial direction, the isolators thereby being deformed to at least partially reduce the transmission of energy between the devices.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the linear assemblies of Hubert to have been linear bearing assemblies, as taught by Abramowsky et al., in order to provide an alternate and equally effective means of damping movement between the first and second devices.

Re: claims 7 and 19. Hubert, as modified, discloses the claimed invention except for the limitation of the isolators being formed of at least one of the groups consisting of rubber and elastically deformable polymers. Since Applciant failed to provide an

explanation of criticality associated with the specific use of rubber or elastically deformable polymers Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the isolators to have been made of rubber, for example, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability of the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Re: claim 10. Hubert shows in figure 1 and discloses in col.1 lines 23-31 the limitation wherein at least one of the first and second devices (particularly the second device 1,2,3,5,11'''') is a boost vehicle configured to provide thrust for propulsion.

Re: claim 11. Hubert shows in figure 1 the limitation wherein at least one of the first and second devices (particularly the first device 4,6,10'''') is a kill vehicle.

6. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6244541 to Hubert in view of US Patent 6416030 to Bergdahl et al.

Hubert lacks the limitation of the isolators being formed of at least one of the groups consisting of rubber and polymers.

Bergdahl et al. teach in figure 1 and in col. 3 lines 44-48 the limitation of isolators 32,34 in a shock isolation system extending between first and second devices 38,50 and 26 being formed of rubber.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the isolators of Hubert to have included isolators formed of rubber, as taught by Bergdahl et al., in order to provide a means of isolating and/or attenuating the influence of forces on the body.

7. Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6244541 to Hubert in view of US Patent 3243154 to Dryden.

Hubert lacks the limitation of at least some of the isolators comprising springs.

Dryden teaches in figure 2 the use of a shock isolation system including isolators between devices 16,18 and 22 in the form of springs 46,48.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the isolators of Hubert to have included springs, as taught by Dryden, in order to provide an alternate and equally effective means of absorbing shock and damping vibration.

8. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6244541 to Hubert in view of US Patent 2729443 to Olinger.

Hubert describes the invention substantially as set forth above, but does not include the limitation of the linear bearings and isolators being arranged in substantially planar and polygonal configuration.

Olinger teaches in figure 4 the use of a shock isolation system comprising linear assemblies arranged in substantially a planar and polygonal configuration.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the linear bearing assemblies of Hubert, as modified, to have been in a substantially planar and polygonal configuration, as taught by Olinger, in order to provide a desired distribution of shock isolation. Examiner also notes that the change in the shape of the arrangement of the linear bearing assemblies is a matter of design choice absent evidence that the

particular configuration is significant. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

9. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6244541 to Hubert in view of Abramowsky et al. as applied to claims 1 and 12 above, and further in view of US Patent 5884736 to Burdisso et al.

Hubert, as modified, describe the invention substantially as set forth above including the presence of a linear bearing or sleeve shown around element 29e within element 31e, but does not include the limitation of the linear bearing having a plurality of balls for rollably contacting the shaft member.

Burdisso et al. teach in figure 3 the use of a shock isolation system comprising a linear bearing having a plurality of balls shown in the area of the lead arrow of number 303.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the linear bearing of Hubert, as modified, to have included balls between the elements 14 and 40 in order to result in an alternate means of providing a low friction interface to facilitate sliding.

10. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6244541 to Hubert in view of Abramowsky et al. as applied to claims 1 and 12 above, and further in view of US Patent 2729443 to Olinger.

Hubert, as modified, describe the invention substantially as set forth above, but does not include the limitation of the linear bearings and isolators being arranged in substantially planar and polygonal configuration.

Olinger shows in figure 4 the use of a shock isolation system comprising linear assemblies arranged in substantially a planar and polygonal configuration.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the linear bearing assemblies of Hubert, as modified, to have been in a substantially planar and polygonal configuration, as taught by Olinger, in order to provide a desired distribution of shock isolation. Examiner also notes that the change in the shape of the arrangement of the linear bearing assemblies is a matter of design choice absent evidence that the particular configuration is significant. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Response to Arguments

11. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mmb
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April 18, 2005
Melody M. Burch
4/18/05